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DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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FILE NO. 143

MONTHLY REPORT

FOR

JULY - 1922.

143 - (July - 1922)

August 5, 1922

Dear Sir:

The following is my report on conditions in the Yellowstone National Park and on the operation of the Park for the month of July, 1922:

I. GENERAL CONDITIONS:

Fortunately, from a standpoint of forest fires and feed for the game there were several heavy rains during the month of July. The hay on the Buffalo and other ranches grew rapidly and reached normal maturity. The forests, while dry at various periods during the month, were thoroughly wet down by the storms just when the fire hazard became serious. The rains gave us an opportunity to thoroughly drag the roads and as a result they were in exceptionally good condition throughout the month. Many compliments were received on the fine condition of the highways.

As will be noted from the travel reports, the number of tourists entering the park during the month broke all previous records for July. On July 13th, 1811 people entered the park, breaking the record for entrants on a single day of 1659 of August 8, 1922. This record of July 13th, however, was smashed on July 23rd when 1983 people entered the park. Other records smashed on July 23rd included the rail travel for a single gateway, the Union Pacific bringing in 757 at West Yellowstone as compared with 734 brought to the Northern gateway at Gardiner on June 20th, 1922. Also, on July 23rd the Walther League entered the park. There were 480 people in this single party, the largest party so far as we know that ever entered the gates of the Yellowstone. Full travel statistics with comparative figures for July 1921 and July 1920 are included in this report.

On July 1st the new transportation line between Lander, Wyoming, the terminus of the Chicago and Northwestern Railroad and Moran, on Jackson Lake, was put in operation. This line, as I have heretofore reported, was financed by citizens of Lander and the Wind River Valley. Four standard White National Park busses of the same type as those used in most of the National Parks were purchased by the new company and put on the Lander approach road. These busses leave Lander every morning, go through to Dubois, where a stop is made for lunch, then go on to a new lodge called Twogwotee Inn on Brooks Lake. Tourists spend the night at Brooks Lake both coming and going from the park. The second day of the trip from Lander takes the traveler to the Lake Hotel or Lake Camp. A stop is made for lunch at Amoretti Inn, near Moran. Here, passengers transfer to the cars of the Yellowstone Park Transportation Company, which this year make daily scheduled trips from the park to Moran and return, leaving Old Faithful in the morning and reaching Moran for lunch. During the month of July only 36 people came into the park from Lander on the new transportation line. Of course, it takes time to develop rail travel to a new gateway. The Lander entrance will never be as popular with rail visitors as the other gateways but it will be a factor in the tourist business of the park and should be given all possible encouragement.

On July 15th, the Hoback Canyon Road was formally dedicated with appropriate ceremonies. This is the road that leads directly into the Jackson Hole from Rock Springs on the Lincoln Highway. The road is still new and soft but is in condition for travel this year. We are advising heavily loaded cars and cars not in good condition not to take the road, but big, powerful cars not heavily loaded can make the trip easily. Participating in the ceremonies on July 15th were: Governor Robert D. Carey of Wyoming; Hon. Frank W. Mondell, Congressman from the State; the State Highway Commission; several officials of the Union Pacific Railway and a large number of prominent people from the southern part of the State. There were over 500 cars at the celebration. A barbecue was held and the affair was altogether a success. I was unable to attend the dedicatory ceremonies on account of the visit of the National Editorial Association to the park.

Another event of great importance during the month was the commemoration of the Fiftieth Anniversary of the Park, held at the Junction of the Gibbon and Firehole Rivers, on July 15th, under the auspices of the National Editorial

Association. A separate report on this event has already been submitted and it will also be described more fully elsewhere in this report.

During the month the public utilities of the park rendered unusually good service and never before have there been so few complaints. Meals in the hotels were exceptionally good and well served, resulting in many favorable comments.

There were practically no accidents during the month, in fact, the only accidents we have had this season have been the result of slight collisions between private cars of motorists. There have been some arrests for the violation of laws and regulations but there were rather less of these than usual.

The public utilities and the Government have all done much important work during the month which has resulted in improving the appearance of the park. The grounds of the permanent camps have undergone the most thorough cleaning they have ever had. The painting of many buildings by the Government at headquarters and the beginning of the painting of Mammoth Hotel are high lights in the clean-up program.

Competent labor was not so easily obtained during the month of July. As a result, we were not able to get quite as much work done as we expected. Many excellent workmen that we had to turn away in May and early June because of lack of funds found work elsewhere and were not available in July. There is very little unemployment in this region at the present time except as a result of the railroad strike. Some of the striking shopmen at Livingston, Montana, were employed by us but did not remain with us very long. The remark was made by one of our road foremen that the striking shopmen apparently came up to fish instead of work but even went so far as to want their fish poles cut and prepared for them.

While the strike toward the end of the month resulted in some decrease in train travel, on the whole, this unfortunate labor difficulty has not seriously affected the park so far as travel is concerned. We were afraid up to the end of the month that there was danger of the travel falling off seriously during August. We were agreeably surprised on August 1st to have 689 people brought in by rail as against 337 the same date last year. The strike slowed up freight deliveries, however, and this resulted in some embarrassment in the beginning of some of our construction work. It was particularly difficult to get delivery on water pipe which interfered with the building of our new automobile camps.

Weather

The following weather records are quoted from the report for July of the Observer in charge of the local United States Weather Bureau at Mammoth Hot Springs, Park Headquarters:

Temperature: Monthly mean, 59.7°, is 1.8° below normal. No unusual temperature extremes occurred, the highest being 86° on the 3rd and the lowest 38° on the 17th.

Precipitation: Total, 1.45 inches, is 0.27 inch above normal. During the two rainy periods--4th to 11th and 19th to 24th--thundershowers occurred almost daily.

Snowfall: None.

Wind: Average hourly velocity 6.5 miles; normal 6.9. The maximum velocity of 39 miles per hour from the northwest on the 5th is not unusual.

Sunshine: Percentage of possible 76; normal 73.

Travel

In spite of conditions that should in every way discourage travel to the park, all previous records for the month were broken. A total of 38,484 people entered the park during the month, which is 5,965 more than 1921 and 7,475 more than 1920. The season total on July 31st was 51,570, or 9,375 in excess of 1921 and 13,107 of 1920. A total of 12,645 tourists reached the park by rail as compared with 11,119, the previous high mark established in 1920. Statistics showing comparative figures for 1920, 1921 and 1922 will be found attached hereto.

II. PERSONNEL

appointees

On July 31st there were 115/ on the payrolls. The following list shows the number of employees of various classes serving during the month with a general statement of the kind of work in which they are engaged:

<u>No.</u>	<u>Class</u>	<u>Kind of Work Performed</u>
1	Superintendent	General administration and supervision of all activities in the park.
1	Asst. Supt.	Administration, purchasing, disbursing. Promoted from Purchasing Clerk and Special Disbursing Agent on May 22, 1922.

1	Asst. Supt.	Information, reports, misc.
3	Asst. Engineers	1 in charge of engineering work in park, two assisting.
7	Clerks	1 Financial Clerk; 1 Cost Accounting Clerk; 1 Personnel, file and report clerk; 1 Time and Payroll Clerk; 2 Stenog-Typists on stenog. work, information and miscellaneous work for superintendent; 1 Stenog-Typist on orders, proposals and vouchers.
1	Park Naturalist	Scientific research work and developing museum.
3	Electricians	Operated power plant regular shift, including Sundays, read meters, did necessary line work.
4	Foreman	1 in charge of Headquarters Corral; 1 repairing sprinkler tanks along roads; one on construction (1 appointed in June also on construction).
1	Telegraph Operator	Sent and received all Government Western Union messages, operated one shift on tele. switchboard.
3	Telephone Switchboard Operators	Operated telephone switchboard daily shifts, including Sundays.
1	Master Mechanic	In charge of shops and of repair to heavy road machinery.
1	Blacksmith	General blacksmith work, including shoeing horses in shop, overhauling and repairing tools and equipment.
1	Master Painter	General shop work, including painting equipment and buildings.
6	Laborers	Teaming, freighting, assisting mechanics and miscellaneous work at headquarters.
1	Steward & Master of Transportation	In charge of all transportation and of storehouses.

1	Chief Buffalo Keeper	In charge of tame buffalo herd.
2	Asst. Buffalo Keepers	1 assisting Buffalo Keeper; 1 in charge of hay ranch operations at Blough Creek.
1	Buffalo Herder	Assisting Buffalo Keeper
1	Master Plumber	In charge of general plumbing and water and sewer systems.
3	Auto Mechanics	2 repairing motor trucks and touring cars. 1 on duty at power plant.
1	Carpenter	Repairing buildings at headquarters.
1	Chief Park Ranger	In charge of ranger force.
1	Fish & Game Warden	In charge special observation and reports on wild animals. In charge of certain trail work.
1	1st Asst. Chief Park Ranger	In charge of northern district.
2	Assts. Chief Park Ranger	1 on duty at Lake District; 1 on duty in Chief Ranger's Office
13	Park Rangers	Patrolling park borders, protecting game, policing up stations, repairing trails and bridges, fire look-out work, handling tourist traffic, miscellaneous duties.
44	Temporary Park	Patrolling, handling tourist traffic, building trails, fire lookout, lecture, guide, information, on duty in Chief Ranger's Office, miscellaneous duties.
9	W A E Park Rangers	7 in charge of stations; 2 motorcycle patrol.

Leaves of Absence

Wm. L. Bicket	Carpenter	July 3 (noon) - 3	$\frac{1}{2}$ da.
Floyd L. Harriett	Laborer	July 14 (noon) - 17	$2\frac{1}{2}$ da.
Bert Stinnett	Master Mechanic	July 26th	1 da.

W. L. Bicket	Carpenter	July 31 (noon)	$\frac{1}{2}$ da.
Wm. H. Riley	Auto Mechanic	July 20-31 (noon)	9 $\frac{1}{2}$ da.

Furloughs

✓ Carrie O. Haumesser, Stenographer-Typist, \$1320 per annum, plus increase of compensation, on leave without pay, April 1st--September 30th, 1922.

Francis E. Bredon, Assistant Electrician, \$1200 per annum, plus increase of compensation and quarters, furloughed February 1st--July 31st, 1922.

In addition to the regular employees listed above under appointment, the following were employed temporarily by the day:

	<u>July 1st</u>	<u>July 31st</u>
Mechanics	10	12
Painters	3	10
Cooks	23	37
2-horse teamsters	35	65
4-horse teamsters	19	30
Laborers	89	81
Skilled Laborers	46	95
Plumbers	<u>2</u>	<u>2</u>
	227	332
Appointees	<u>115</u>	<u>115</u>
	342	447

III. WORK COMPLETED

(a) Construction of Physical Improvements

Trails: Work on the loop trails was practically completed during the month - so far as funds would permit. 56 miles of new trail connecting with old trails makes possible the completion of the loop trail with very little travel on main roads. Horseback parties leaving Mammoth for a trip around the park will hereafter cover the following route: Mammoth to Swan Lake Flats via old road and Golden Gate Trail; thence follow road to Willow Park; thence follow Riverside Trail to

Straight Creek and old trail south to point about $\frac{1}{2}$ mile south of Appolinaris Spring; thence along road to 13 mile post, where old road leads off to Norris via Lake of Woods. Leaving Norris the new trail parallels the road to the 7 mile post where it strikes the Mesa Trail and follows the same to the Fountain Station. From the Fountain to Old Faithful the trail is practically all new construction.

Leaving Old Faithful follow the old trail to Lone Star Geyser and over newly constructed trail to Thumb. New trails have been built to connect with the old Lake Shore Trail on both ends and it is not necessary to go on the road at any point between the Thumb and Lake. Leaving the Lake the old trail on the East side of the river can be followed to the Canyon. From this point there is complete trail connections to Mammoth via Tower Falls or to Norris via Grebe Lake.

The following trails were built during the month:

Trail over Bunsen peak completed
Trail from Norris to Virginia Meadows completed - 4 miles ✓
Norris to Fountain - 20 miles ✓
Fountain to Old Faithful, via Paint Pots and ending at Biscuit Basin - 9 miles
Old Faithful to Thumb, leaving Junction of Spring Creek and the Firehole River - 15 miles ✓
Thumb to Arnica Creek - 5 miles ✓
Bridge Bay to Lake - 3 miles ✓
Trails around Canyon - 2 miles ✓

Twelve men were employed during the greater part of the month on trail work.

The loop trail is to be known as the "Howard Eaton Trail". See your wire dated July 3rd, 1922.

(b) Maintenance and Repair of Physical Improvements

Improvements by Park Utilities

Yellowstone Park Camps Company: They report having completed several new cabins at each of their camps and that all construction work started in June was brought to completion during the month of July. The greater part of their time was spent in maintenance and repair work.

Yellowstone Park Hotel Company: reports the following for the month of July:

Telephone Department: Built new pole line between Madison Junction and Firehole Cascades. Replaced numerous poles on telephone circuit around Park. Started wiring on Lake Hotel addition; first and second floors now practically completed.

Plumbing and Heating: Started setting new boiler at Old Faithful Inn boiler room. Started work on water lines and steam lines in Lake Hotel addition.

Paint Department: Painted Mr. Child's house at Mammoth Hot Springs. Paint for Mammoth Hotel received and started painting on Mammoth Hotel.

Construction: Lake Hotel addition - frame work for entire building now in place. Foundation and frame work of new mess house and new bunk house at Lake completed.

IV. WORK IN PROGRESS

(a) Construction of Physical Improvements

Dunraven Pass Improvement: The widening and other road improvements in Dunraven Pass on which work for the season was resumed June 19th, was continued during the month. Three-quarters of a mile of graveling was completed between the 6 and 7 mile posts from the Canyon. Gravel is secured from a pit below the 6 mile post, shoveled by hand and hauled in dump wagons. The widening work in the Pass was completed last fall with the exception of the side ditches. As the material is all solid rock it is necessary to drill and blast. The air compressor was started July 5th and by the end of the month 1½ miles of ditch had been blasted. The power grader outfit will be used to grade off the loosened material. An average of four teams and 14 men were employed on the project during the month. When the graveling is completed, the four teams now engaged in hauling gravel will be used in the ditch work.

Parapets at the Needles: The crew engaged in building parapet walls and guard rails at the Needles near Tower Falls continued that work during the month. Twenty-four masonry piers were built on the wall near Overhanging Cliff; 157 log posts were placed in the ground; 3030 lin. feet of 9" log guard rail placed on the posts; 24 perch of masonry retaining wall built and 30 cubic yards of material excavated from a point to widen the roadway. From July 1st to 10th the crew consisted of 2 teams and 8 men. After that date 1 team and 6 men. This work at the Needles will be fin-

ished about August 8th.

Lake Ranger Station and Community Building: Good progress was made in the erection of this structure which is about 75% completed. The log work, including the rafters, purlins and trusses is finished, the floor joist in place and the camp fire style fireplace in the center of the community room is completed. Some difficulty was experienced in finding suitable rock for the fireplace, necessitating a long haul which increased the costs. The building as a whole, however, will be completed well within the estimated amount. Some very favorable comments have been expressed by visitors, regarding the unique design of the structure and the workmanship.

(b) Maintenance and Repair of Physical Improvements:

Sprinkling: The 2 auto truck sprinklers, 2 two-horse sprinklers and 16 four-horse sprinklers continued their work during the month, sprinkling twice daily 107 miles of road. On rainy days the sprinkler teams were used to haul drags.

Sprinkler System Repair Crew: A repair crew under Foreman Farrell was kept busy during the month making repairs and extending the system. Two new $1\frac{1}{2}$ " pipe lines were placed across Beaver Lake, each about $\frac{1}{2}$ mile in length. One line supplies a tank near Obsidian Cliff and the other supplies the Beaver Lake Camp and a tank at that place. The system is now being extended to include that section of road between Morris Junction and Virginia Cascades. Water is secured from a creek that flows into the Gibbon River $\frac{1}{2}$ mile below Virginia Cascades, from the south. To carry the water across the Gibbon River a trestle and flume over 300 feet long and 21 feet high has been built. About 2 miles of ditch will be required of which $\frac{1}{2}$ mile is finished. One new 2200 gal. tank was installed at Otter Creek and a new round tank of 1600 ga. capacity placed at Beaver Lake.

Road Maintenance: Two men with a team and dump wagon are placed at each sprinkler station to maintain the roads in those sections. Other maintenance crews are located as follows:

Canyon: Five men and two teams performed general maintenance work. Two sections of dry rock wall were rebuilt near the lower falls and two 12" G.I. culverts installed.

Dunraven Pass: Four men and three teams maintained this section and the Mt. Washburn Road.

Tower Junction: Four men and two teams. In addition to performing general maintenance work this crew redecked the 50 foot span bridge over Tower Creek.

Blacktail Deer Creek: Five men and two teams graded this section several times, graveled 800 feet of road near the seven mile post and began graveling a section of road 2200 feet in length near the Beaver Dam. An excellent pit of disintegrated rock has been located for this work.

Cooke City Road: Six men and three teams did badly needed repair and maintenance work on this road between Soda Butte and the Northeast Entrance. Fourteen log culverts and one 20 foot log bridge were rebuilt; one thousand feet of road washed out last spring by high water was rebuilt; 1100 feet of road was fully graveled and 16 miles of road graded and repaired.

Mammoth: Five men and three teams. This crew, in addition to maintaining the roads in the vicinity of Mammoth, repaired and opened to travel the old road around Bunsen Peak. To place this road in condition for automobile travel required considerable work, as some places required widening, sharp turns were improved, washouts filled, guard rails built at dangerous places and the entire road graded and shaped.

West Gallatin: Six men and two teams. During the month this crew worked over the West Gallatin road from the park line to the divide between Grayling Creek and Gallatin River, a distance of $8\frac{1}{2}$ miles. Six small log culverts were rebuilt; four 30 foot bridges over Grayling Creek were redecked with poles; one 8 foot log bridge was rebuilt, eight small culverts were redecked and the $8\frac{1}{2}$ miles of road was graded and repaired.

Virginia Meadows: Four men and 2 teams. This crew maintained 9 miles of road between Norris Junction and the Canyon. Besides general grader and repair work, 800 feet of road was graveled and one 12" G.I. culvert installed.

Turbid Lake: Four men and 2 teams maintained the East Entrance road from Indian Pond to the eleven mile post from Lake Junction.

Cub Creek: Four men and 2 teams maintained the East Entrance road from the 11 mile post to Sylvan Pass.

East Entrance: Five men and 2 teams maintained the East Entrance road from Sylvan Pass to the East Entrance and from there to the three mile post in the East Forest Reserve.

Goff Creek: Five men and two teams maintained the East Forest road from the 3 mile post to Moss Creek. The road was graded over several times, several sections graveled and all willows and other brush growing close to the roadway were cut back several feet to permit a better view of the road ahead.

Elk Park: Two men and one team maintained the East Forest road from Moss Creek to the East boundary line of the reserve.

Lewis River: Four men and two teams maintained the South Entrance road from Cold Spring to Snake River station. The road was graded and general repairs made.

South Forest: Six men and three teams. This crew graded and repaired the South Forest road from Snake River station to a point four miles below Arizona Creek. The end of the month they had moved camp down to Pilgrim Creek.

(c) Miscellaneous Improvement Work:

The Steward and Master of Transportation with two helpers the greater part of the month, and one additional during the last of the month, reports eight trucks delivering supplies at the sprinkler camps, road crews and ranger stations.

The Master Plumber, with 10 helpers, 2 at Mammoth and 8 out in the park, was busy with general maintenance work on the water and sewer systems and in the construction of an auto camp at Madison Junction. Towards the middle of the month work was begun on a water system at the public automobile camp at Thumb and the water supply in the public automobile camp at Old Faithful was increased.

The Master Painter and his assistants stained the outside of Canyon Ranger Station, put up approximately 300 new metal signs throughout the park; started work on pestoock, scraping and painting; started roof work on buildings; 5 buildings finished along front row at Mammoth Hot Springs - two barracks buildings; 2 stable buildings and 2 storehouses given one coat. Work was done on side of buildings; namely, Canteen, Allen's former shop building, Community House, Bilkert's quarters, Morgue building and Rangers' quarters. Mr. Hill's quarters were completed. Lean-to addition built to paint shop; approximately 450 signs made and painted for "Howard Eaton Trail", camps and road signs.

The Carpenter in charge, with one other carpenter and a helper, devoted most of their time in the re-shingling

of the Assistant Superintendent's quarters and in the remodeling and general repairing of the old guard house which is being prepared for quarters.

The Blacksmith and his helpers repaired dump wagons, made 24 neckyokes and 24 singletrees, besides horse-shoeing and general repair work on equipment which came in for such attention.

The Mechanics overhauled two Fords and one Mack, besides doing general repair work on a number of trucks and touring cars. Motorcycles were kept in general repair throughout the month.

The Telephone System and Power Plant were operated in the usual manner. The Power Plant was run constantly with the results shown in comparison with results for July, 1921, as follows:

	<u>1921</u>	<u>1922</u>
Total current generated, in K W hours	20,590	15,160
Of this, sold to public utilities		
@ 5¢ per K W H	6,947	6,217.54
Consumed for street lighting	1,286	2,403
Balance, consumed in Government		
buildings, for power and lighting,		
lost on lines in transit	12,157	6,539.46
Peak load during month in KW	62	78

Daily reports of operations were submitted.

A new telephone line was built from mile post 8, from Canyon Junction, Dunraven Pass, to the Lookout Station on top of Mt. Washburn. This line is approximately one and one half miles long and is the highest telephone line in the park. Work is now being done putting up an additional line between the Morris and Canyon Ranger Stations. A small crew of men is at work on the Soda Butte line. The lines between the Canyon and Snake River have also been overhauled and 470 poles have been reset.

The Telephone and Switchboard Office was open daily from 6:30 A.M. to 12:00 P.M. (midnight). The total business handled was as follows:

Switchboard Calls

On Government local lines	13,353
On Hotel Company lines	1,473
On Long Distance Connections	<u>364</u>
TOTAL	15,190

Telegrams

Government sent	91
Commercial sent	188
Government received	72
Commercial Received	<u>95</u>

TOTAL 446

Buildings and Corrals

Foreman McFarland: During the greater part of the month 5 men were at work on the lawns about headquarters. Towards the end of the month this number was cut to 4. One man, with a team, has been in and about the auto camp, one driving a sprinkler wagon, and another at work in the barns and about headquarters.

Haying Operations

Mr. R. D. Stell, of Gardiner, Montana, started cutting hay on the flats above Gardiner on July 12th and finished on July 31st. The stacks have not as yet been measured for tonnage. Rain interfered with the work to a great extent. The haying crew for Slough Creek was organized on July 20th and started operations on July 22nd. At the Buffalo Ranch haying operations will begin during the first days of August.

Office Force: The office force was busy with the usual routine work which includes orders, payment of vouchers, preparation of accounts, reports, general correspondence, etc. 1457 pieces of official mail were received and 1753 were sent out during the month. Much time was devoted to the preparation of a new cost accounting system to fit into the new accounting system.

Sanitation: During the month Junior Assistant Sanitary Engineer A. P. Miller, completed and turned over to the Superintendent, plans for sewerage system and treatment plant for the Upper Geyser Basin. He also installed liquid chlorine at Canyon Camp sedimentation tank, and that tank is now functioning successfully. Bacteriological analyses of waters and milks throughout the park were continued.

Mosquito Control Work: Dr. Harrison G. Dyar, who has been working on the mosquito situation in Yellowstone Park finished his work here about the middle of the month. Mrs. Dyar collaborated in this investigation and all of the work was done

without charge. This work is of great value and shows how effective mosquito control work may be accomplished. A copy of Dr. Dyar's report has been forwarded to the Washington office.

Ranger Force

Patrols: The regular routine of patrol work was carried out successfully and no special patrols of any importance were made.

Forest Fires: Heavy rains during the month made the fire danger practically negligible. Three small fires were reported.

On July 3rd, some Transportation Company bus drivers discovered a small fire in Gibbon Meadows. They made every effort to put it out, but did not have enough equipment. They notified rangers at Norris and Rangers Fred C. Finch and Ernest Matthew put the fire out. It burned over an area of 15x20 feet.

On July 16th a fire was reported near the second bridge from Old Faithful, 3 $\frac{1}{2}$ miles out on the Thumb Road. Yellowstone Park Transportation Company Driver No. 70 discovered the fire and went back to Old Faithful for rangers. Bicknell and Robertson proceeded to the scene at once and put the fire out. It burned over an area of about 30 feet in diameter, and was caused by a careless camper.

On July 29th, W. Hutchings, Assistant Buffalo Keeper at the Slough Creek Hay Ranch, discovered a fire on Buffalo Creek. This was in a particularly inaccessible place and the origin is a mystery. The fire burned over an area of about 1 acre and was put out by Hutchings and two assistants.

Guide Service: Ranger Guides conducted a total of 15,703 tourists over the formations at Mammoth and Old Faithful. Below is a detailed statement of these activities:

MAMMOTH		<u>Motel</u>	<u>Camps</u>	<u>Total</u>
		1235	3544	4879
OLD FAITHFUL				
	A.M.	1642	3170	
	P.M.	1908	3521	
	Special	65	619	
		3515	7310	10825
Total Hotels & Camps				15703

Many private motorists were guided with the rail tourists, the parties being made up at the camps and hotels.

Information Office: A total of 11,362 people visited the Information Office and Museum during July, compared with 11,303 in 1921 and 3,146 in 1920. A total of 22,660 free publications were distributed and 1721 sale publications. The following is a statement of the sale publications to date:

<u>Article</u>	<u>Stock</u>	<u>July Sales</u>	<u>Total</u>	<u>Balance</u>
Portfolio	747	393	460	287
Geological History	697	422	557	140
Geyzers	954	356	483	471
Fossil Forests	483	184	252	231
Fish	500	73	96	404
Glimpses	494	84	116	378
Bulletin 611	63	11	16	67
Bulletin 612	37	14	18	19
U.S.G.S. Maps	154	57	73	79
Panoramic Views	93	46	60	33
Haynes	150	104	127	23
Truthful Lies	825	77	100	725

Service to Public: Requests were made to locate a total of 18 parties thought to be in the park. These persons were wanted by friends in order to complete delivery on important telegrams and for numerous other reasons. All of these parties were located in the sense that it was ascertained whether or not they were in the park, or if they had ever come in. Seven of the parties were located in the park and the messages delivered. Numerous articles were reported as being lost or found and an effort was made to locate the owners of lost articles.

Park Naturalist

Park Naturalist Skinner collected 64 specimens for the museum, installed 44 specimens, and made typewritten labels to the number of 66. 70 letters on scientific subjects were sent out. 7 lectures on "History", "Animals", "Yellowstone Lake", "Geyzers", and "Birds" were given at various points. 3 inspections of forests were made. Studies that resulted in his notes on Seasonal Changes and Natural Phenomena were made. Throughout the month, notes on birds, animals, flowers and other natural objects were collected.

Three half days were spent helping rangers in the field. Five evenings were spent in the Information Bureau when the crowds seemed to demand it. Two days were spent on special work assigned by the superintendent.

Monthly notes on Flowers, Geology, Birds, and Animals were prepared. (Copies attached hereto). 61 sets were posted and 3247 sets were given out.

V. WORK BEGUN:

Graveling Section of South Forest Road: On July 10th Foreman Conahan established camp at Dime Creek in the South Forest Reserve, 5 miles south of Snake River Station. From this location the road in that vicinity will be improved by widening and graveling. The first section to receive attention was the Dime Creek grade about three-quarters of a mile in length leading south from Dime Creek. Due to the clay-like material of which the road surface is composed, this has always been a dangerous and difficult road to travel in wet weather. This grade has been widened from four to six feet which is sufficient for passing room at any point and about 500 lineal feet of graveling completed, a width of 16 feet.

A diligent search of the vicinity failed to reveal more than two places where material at all suitable for surfacing could be secured. The place selected for a pit is located on the south side of the road about 500 feet north of Dime Creek. The trees, stumps and shrubbery were cleared off a space about 1 acre in extent and the top soil removed to a depth of 1½ feet. Many loads of boulders were also cleared from the surface; these, together with the top soil were hauled to low places in the road for raising the grade.

The dump wagons are being loaded with wheel scrapers, which haul the gravel from the pit onto a platform and dump through a trap.

Due to the great amount of preliminary work required in clearing, stripping and otherwise preparing the pit, and widening and preparing the road for graveling, a poor showing for the time in completed surfacing has resulted. As this preliminary work is now completed, however, it is expected good progress will be made with the surfacing during next month.

On July 31st, the crew employed on the job consisted of a foreman, cook, waiter, 20 men, 11 teams and two saddle horses. One saddle horse is for the use of the foreman and the other for a night herder. As good grazing can be had in the camp vicinity it was thought more economical to graze the stock nights in charge

of a herder than to supply hay so far from headquarters.

Upper Basin Sewer System: On July 5th Foreman White, with a crew of 16 men and 3 teams, began work on a sewer system at the Upper Basin, which has been designed by the Public Health Service, to collect and dispose of sewage from the hotel, public auto camp, permanent camp, ranger station and several other places in that vicinity.

The design of the system requires the construction of two concrete sedimentation tanks, one 20x25 feet and the other 20x40 feet; the placing of 3646 feet of 6-inch pipe, 1264 feet of 8-inch pipe and 2176 feet of 10-inch pipe.

The excavation for the small tank, which required the removal of 155 cubic yards of earth and gravel is finished and forms and steel are in place ready for the concrete. The excavation for the large tank which will require the removal of 65 cubic yards of earth and 270 cubic yards of solid rock was started, but after reaching a depth of 3 feet the seepage water came in faster than the 3-inch pump could handle it, so work was abandoned until the 8-inch centrifugal pump could be gotten ready. Sewer trenches, 2 feet wide, have been excavated as follows: 500 feet, average depth 5 feet; 1380 feet, average depth 3 feet; 500 feet, average depth 2 feet; 300 feet, average depth 3½ feet.

All material is now on the ground, including the sand and gravel for the concrete tanks. A large percentage of the 6-inch sewer pipe failed to come up to specifications and must be replaced.

In connection with this work the swamp between Old Faithful Inn and the old ranger station has been drained by lowering the level of the creek from the river.

It is estimated the job as a whole is 40% complete.

Repairs to Penstock: The steel penstock which is approximately 2300 feet in length, leading from the reservoir to the power house at Mammoth, is being painted and placed on concrete piers. The piers are 14 inches wide and spaced 15 feet apart. One hundred and forty-five piers will be required, of which 90 are in place. The pipe has been painted with one coat of red lead a distance of 250 feet. The necessary excavation under the pipe and along the sides is 90% finished.

VI. PLANS OR PROPOSED WORK

Fish Planting: The most extensive planting of fish in park history will occupy the attention of the ranger force during the month of August. About 7,000,000 fry and 1,100,000 fingerlings will be planted in the various park streams. This work will cover the greater part of the month of August.

VII. POLICIES

There were no changes in policy during the month.

VIII. COST OF OPERATION

The total expenditures during the month, as shown by the monthly report, amounted to \$38,119.05.

As we are revising the Cost System the July Cost reports cannot be forwarded for some time.

IX. OTHER MATTERS OF INTEREST

Wild Animals

Game Conditions: Ideal weather conditions during July have more than offset the adverse conditions of June and the grazing conditions in the park are excellent. Even if the remainder of the season is exceedingly dry we are practically assured of ample winter forage for all game animals.

Elk: Elk are ranging well back at higher altitudes and are seldom seen along the park roads. Ideal range and weather conditions have kept them in excellent condition. A small herd of elk cows, several calves, and 1 bull, is being held in a portion of the Buffalo Corral where tourists can readily see it and it is attracting much attention.

Deer: Deer are often seen in many parts of the park, especially near Mammoth and the Canyon. They are in excellent condition. During the month several deer were seen on the lawns at Mammoth.

Bears: Bears are numerous about the park and often seen. As many as 14 grizzlies have been seen on the Canyon garbage dump at one time. Other localities have more bears than at any time in the past two years. There are several now in the park that are becoming such nuisances that they will probably either have to be shot or trapped for zoos during the month.

One bear walked around the buildings and over the lawns at headquarters several times during the month.

Buffalo, tame herd: The main herd has been ranging well back on Mt. Morris and has not been brought down for exhibition or other purposes during the month.

At the Buffalo Ranch the greater part of the month was spent in clearing approximately 180 acres of sagebrush and putting the land into condition for seeding. It may be figured that quite a saving was made to the National Park Service on this work. At any rate, it is interesting to note that had this work been let out on contract it would have cost around \$945.00, whereas, the actual cost was in the neighborhood of \$475.00. A flag pole, 41 feet in length, was prepared and erected at the Ranch. A show herd of 18 head is kept at the Buffalo Corral (near Mammoth) for exhibition purposes.

Buffalo, wild herd: The wild herd is ranging well back on the Mirror Plateau and headwaters of the Lamar in the vicinity of Saddle Mountain. As it is not good policy to disturb these animals no observations have been made in an effort to determine their conditions.

Antelope: Antelope have been seen in localities ranging from Blacktail to Specimen Ridge and are apparently in excellent condition.

Mountain Sheep: No rangers have reported seeing any but there is no reason why they should not be in excellent condition.

Moose: Moose have been seen in several different parts of the park and in common with other animals are coming along in fine shape.

Predatory Animals: Park Ranger Henry Anderson killed three wolves during the month. These are the only predatory animals reported killed.

Fish and Fishing

Fish Planting: During the month of July fish were planted as follows:

Eastern Brook

June 30	Lava Creek	12,000
July 1	Black Tail Deer Cr	12,000
2	Glen Creek	12,000
2	Indian Creek	12,000

	July 3	Willow Park	36,000
	" 3	Swan Lake	<u>12,000</u>
			96,000
<u>Native Trout</u>	July 31	Slough Creek	40,000
	" 31	Goode Creek	<u>40,000</u>
			80,000

The following is a summary of the Bureau of Fisheries operations for blackspotted trout eggs during July:

"The total collection of this season, which closed July 20, amounted to 16,751,920 eggs. Of this amount 11,827,000 were obtained during the present month. Last season the same fields produced from July 1 to July 23, when collecting operations ceased, 4,270,000 blackspotted trout eggs. This month there were shipped out of the park eyed eggs amounting to 3,770,000 and 5,710,000 eyed eggs were planted in the various spawning streams of Yellowstone Lake; total distribution of 9,480,000 dyed eggs and 140,000 fry."

Fishing: Records show that a total of 26,881 fish were taken from park waters during the month of July, and this number does not include fish caught by rail tourists.

Cooperation with Dr. Ward: Dr. H. B. Ward, noted expert on parasites, continued his work at Yellowstone Lake. Assistant Chief Ranger Douglas accompanied Dr. Ward on the four trips made to Molly Island where numerous specimens were collected, among them, pelicans (young and old), 4 gulls, 2 red-breasted mergansers and a number of pelican eggs.

Seasonal Changes

Botanical: Grasses and other forage crops have been badly injured by the lack of rain during June.
 July 1st, harebell in bloom becoming common two weeks later; mentzelia began blooming near Gardiner; July 2d, coralroot orchid found in bloom near Basin; July 4th, Labrador tea in profuse bloom near Kepler Cascade; July 5th, camas south of West Thumb and pink snapdragons along Middle Creek; July 7th, sunflowers on warm spot on Yellowstone Lake shore; July 10th, yarrow and roses found to be common near Mammoth; July 12th monkshood started blooming near Basin and became common ten days later; July 19th, a tall larkspur found near Crescent Hill; July 20th, mint in profuse bloom near Firehole Lake; July 22d, wintergreen

found near Basin: rabbit bush in bloom near Mammoth on the 27th and four days later at Slough Creek flats.

Pine pollen began falling on July 1st.

Little elephants were very abundant throughout the month, and tall larkspur after the 20th, and sunflowers on Dunraven Peak after the 23rd.

Ripe strawberries found near Basin on the 3rd, becoming common on the 21st. Gooseberries ripe at Mammoth on the 19th. Huckleberries ripe on the Park Plateau on the 22d.

Wild buckwheat began turning red on the 24th and barberry leaves, strawberry leaves, and wild geranium leaves by the 26th.

Bird: Migratory birds from the north arrived: 8th, solitary sandpiper; although they probably arrived earlier, Wilson phalarope first seen on the 25th and willet on the 30th. Blackbirds began to flock on 6th. Almost all our birds were nesting during July. Robins still in nest on the 4th; young Brewer blackbirds out of nest on the 11th; young pink-sided juncos out of nest on the 13th; bluebirds still in nest at Mammoth on the 24th; young cliff swallows out of nest on the 26th. Osprey at Grand View hatched about the 1st and at Inspiration Point ten days later; at Eagle Nest Rock, the young were ready to leave the nest at the end of the month.

Bird songs were heard for the last time: vesper sparrow on 10th; pink-sided junco on the 14th; robin and Cassin purple finch on the 15th; meadowlark on the 19th; white-crowned sparrow on the 23rd; and song sparrow on the 31st. All of these dates are later than usual.

July always fails to show any decisive indications of season, and everything seems normal now. No signs yet of an early or hard winter, in contrast with last year.

Phenomena

At Mammoth Hot Springs: Hymen Terrace is so nearly dry as to be barely alive. There is a slight amount of activity at Palette Spring. Minerva Terrace is increasing in activity, color improving and spreading, and the stalactitic growth very good. Cleopatra Terrace is finer and as beautiful as ever. A

fine spring and terrace are forming on the northern part of the old Marble Terrace; at present the activity is increasing rapidly, but the "crack spring", just above, has died out. A small spring has started near the old Cupid's Cave and coloring begun to develop. Marrow Gunge Terrace has very little activity. The color is good at Orange Spring, activity increased slightly, a small opening of pencil diameter on top of mound continues to throw a steady stream of water surcharged with gas to a height of ten inches; the small cone remains normal. White Elephant has become highly colored and maintains its high activity. Dedolph Spring, Stygian Cave, Bath Lake, and the Devil's Kitchen remain normal. Angel Terrace shows no change at three openings, but the upper opening (known as "Rainbow Terrace" during 1921) shows more activity. The springs above Jupiter Terrace are normal altho the Terrace is building rapidly. Mound Terrace is increasing in activity and spreading out over new ground. Pulpit Terrace is improving in color and beauty. Taken as a whole, this formation is more active and more interesting than I have ever seen it.

At Norris Geyser Basin: the Whirligig, Constant, Bath-tub, New Crater, Minute Man, the geyser near the Black Growler, and the Cinder Pool are all operating normally and as reported last month. The Valentine geyser has played only four or five times: the Mud Boiler has lengthened its interval and is somewhat uncertain: and the Monarch has not played at all.

At the Lower Geyser Basin: all features remain as reported on June 1st. The Mountain geyser played once from the new opening on July 4th.

At the Upper Geyser Basin: there was another sudden change in Old Faithful geyser; during the first four days of July the average interval was 60 minutes with great variations, later the intervals were more regular and averaged 63 minutes; extreme intervals were 36 minutes and 82 minutes. The Daisy's average interval was 77 minutes. The Grand played from 9½ to 13 hours with an average interval of 11 hours. The Giants played once on the 2d, continuing until the afternoon of the 3rd; but the Beehive remained quiet. The new geyser continued regular at 20 minute intervals. The Castle played three or four times a week. The Giant played on the 5th, 12th and 27th. The Lion, Grotto, Oblong, Artemisia, and Sawmill played frequently but irregularly. The Riverside played every 7-7½ hours with an average of 7½ hours. The Mortar and Fan geysers did not play. The Lone Star played regularly every three hours with a long series of preliminary eruptions for an hour and a half, and was seen by a large number of people.

Arrests and Violations of Law

The following arrests were made during the month:

July 5th. United States vs. Earl Hales of Utah. Violation of Park speed regulations. Acquitted. Arrested by F. W. Smith.

July 5th. United States vs. Sam A. Parkington of Colorado. Violation of park speed regulations. Plead guilty. Fined \$25.00 and costs of \$4.50. Arrested by Ranger Sprinkel.

July 9th. United States vs. R. F. Adams, Chillicothe, Missouri. Violation of park speed regulations. Fined \$25.00 and costs of case amounting to \$5.50. Arrested by Ranger H. Matthew.

July 13th. United States vs. H. J. Slater of Yellowstone Park Transportation Company. Fined \$25.00 and costs amounting to \$5.50. Arrested by Ranger Sprinkel.

July 15th. United States vs. Ed F. Young of Washington. Violation of park speed regulations. Fined \$15.00 and costs of case amounting to \$0.50.

July 18th. United States vs. Henry Gleet of Montana. Left fire burning and insanitary camp. Fined \$10.00 and costs of case amounting to \$5.50.

July 19th. United States vs. Floyd Landis, of Pennsylvania. Disorderly conduct. Inconvenience of appearing for trial considered sufficient punishment. Arrested by Ranger Robertson.

July 19th. United States vs. R. R. Henry, of Pennsylvania. Disorderly conduct. Acquitted. Arrested by Ranger Robertson.

July 21st. United States vs. F. B. Dodds of Kansas and J. D. Humeston of California. Violation of fishing regulations. Fined \$10.00 each and costs amounting to \$2.75 each. Arrested by Ranger Bicknell.

July 24th. United States vs. Andrew A. Whittemore, of Idaho. Violation of park speed regulations. Fined \$25.00 and costs amounting to \$5.50. Arrested by Ranger Sprinkel.

July 26th. United States vs. A. J. Hirschman, Yellowstone Park Transportation Company. Violation of park speed regulations. Case discharged. Arrested by F. W. Smith.

July 26th. United States vs. S. Spagnola of New York. Defacing Geyser formations at Old Faithful. Fined \$10.00 and costs amounting to \$5.50. Arrested by Ranger Sprinkel.

July 27th. G. E. Thon of Wisconsin. Arrested by Ranger E. Matthew for violation of park speed limit. Reprimanded by Chief Ranger Woodring.

July 29th. United States vs. Carl Wimmer of Colorado. Violation of Park speed regulations. Fined \$25.00 and costs amounting to \$5.50. Arrested by H. Matthew

In addition to cases tried in July the following persons who committed offenses in July will appear before U. S. Commissioner John W. Meldrum during August.

A. H. McClasky, Denver, Colo., violation of park speed regulations. Arrested by Sprinkel.

F. A. Watkins, Cody, Wyoming, violation of park speed regulations. Arrested by Ranger Sprinkel.

T. E. Keefe, Yellowstone Park Hotel Company, violation of park speed regulations. Arrested by Ranger Sprinkel.

Clarence B. Jacky, Yellowstone Park Transportation Company. Arrested by Ranger Wylie.

John B. Milo was removed from the park on July 29th, 1922, by order of the superintendent. He was charged with disorderly conduct at the Lake Camp.

Wheeler J. Miller, Driver #89, arrested by Ranger Mink. Violation park speed regulations. case not yet tried.

Sickness and Medical Attention

Dr. W. S. Crawbuck conducted his medical service in the park during the month and reports having made 86 professional calls on park people and 36 on tourists.

Dr. John L. Treacy, of the Helena Clinic, Helena, Montana, served as physician for the Hotel Company during the first two weeks of July and was relieved by Dr. Rudolph Horsky of the same Clinic. Dr. Horsky served during the last two weeks of July.

Accidents and Casualties

Compared with July, 1921, the past month has been remarkably free from accidents. Last year three deaths occurred and six serious and eight minor accidents, in addition to seven collisions. This year we have had but one death and three minor accidents and collisions, and in no case has there been serious injury to any party.

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During the time the Walther League party was in the park park schedules were completely upset and there was grave danger of accidents. Rangers were detailed to cover all schedules of this party and it is a tribute to their work that no accidents happened and there was no complaint from the traveling public.

On July 5th, Motorcycle Messenger F. W. Smith attempted to pass a Ford car in bend 15 miles from Mammoth on the Norris Road. Due to the fact that the side car tipped when he turned back in the road he ran into the ditch and struck a log. The machine was damaged to some extent and Smith received a severe cut in the left eye. Evidence shows that Smith was to blame for the accident.

On July 29th, J. M. Alexander, driving towards the Lake had a collision on a bad turn above Trout Creek, with J. H. Roberts. Alexander's car was badly damaged but Roberts was able to proceed. Motorcycle Ranger E. Matthew was near the scene, and reports that the accident was entirely the fault of Roberts as he was on the wrong side of the road. Alexander was driving a Reo Nebr. 18216 and Roberts a Buick, Utah 10873.

On July 19th, a collision occurred at the turn of the road near Excelsior Geyser. A car driven by Ben Harrison of Denver, Colorado, going north from Old Faithful, met the car driven by W. H. Johnson at this terminal. Johnson claims that Harrison did not blow his horn; that he was traveling at an excessive rate of speed. These statements are confirmed by Park Ranger Poland who was at the scene of the accident. Mr. Harrison was having carburetor trouble and was running fast up the grade approaching the turn in order that he would not have to stop. Harrison's car had the front left fender bent about one foot from the front; front axle and steering column bent about three inches out of line. Johnson's car had the bumper and left fender bent slightly. The accident happened about 1 P.M. Wednesday, July 19th. Harrison declared his intention of filing a complaint against Mr. Johnson but Johnson does not figure on filing a complaint against anybody although

he feels he is not responsible for the accident. Poland states that Johnson sounded his horn and Harrison did not.

Dr. G. Y. McCracken, 612 N 13th St., Philadelphia, Pennsylvania, died at Canyon Camp at 6:30 P.M., July 26th of apoplexy. Two doctors, Dr. M. H. Niebits of Chicago, Illinois, and Dr. W. L. Thurtell of Limerick, Sask., were in attendance. Walter White, Undertaker of Livingston, Montana, arrived the same night and took charge of the body.

Special Visitors

Dr. Van Orstrand of the United States Geological Survey, visited the park during the month and requested the privilege of testing the temperature of Mammoth Hot Springs. He also tested the temperature of many springs and geysers in the Upper Park, the rangers aiding him.

Dr. W. C. Alden, glacial geology expert of the U. S. Geological Survey, visited the park for the second time early in July and in connection with this trip inspected the Grasshopper Glacier.

Dr. W. C. Mendenhall, Chief Land Classification Board, U. S. Geological Survey, entered the park July 27th via Gardiner and left via Cody, July 29th. This was Dr. Mendenhall's first trip to the park.

A number of Forest Service people were in the park during July. Among them were the following:

T. B. Morse, Asst. District Forester, Ogden, Utah.
W. W. White, Forest Examiner, Missoula, Montana.
W. W. Sampson, Asst. District Forester, Denver, Colo.
F. G. Clark, Forest Supervisor, Butte, Montana.
Walter Derrick, Forest Supervisor, Sheridan, Montana.
F. W. Stoddard, Forest Supervisor, St. Anthony, Idaho.

Mr. H. M. Wheeler, Assistant Forester, District #2, Denver, Colorado, (Former Supervisor of the Colorado National Forest), came into the park July 18th via the Cody entrance and left on July 21st through the South Entrance.

Mr. W. T. Thompson, Superintendent of the U. S. Fish Hatchery at Bozeman, Montana, was a visitor in the park from July 16th to July 19th.

Mr. A. H. Dinsmore, Supt. of the U. S. Fish Hatchery at St. Johnsbury, Vermont, entered the park July 25th by Gardiner and will leave August 15th by West Yellowstone. Mr. Dinsmore is on his vacation and is conducting five boys through the park. However, he is assisting us to a considerable extent in our fish planting work.

Supt. W. S. Lewis of Yosemite National Park, arrived at West Yellowstone (the West Entrance) July 31st. Mrs. Lewis and their little son accompanied him. He is here for consultation on estimates.

Noble Wilt, accountant of the National Park Service, arrived July 21st via the Western Entrance.

Mr. George E. Goodwin, Chief Civil Engineer, National Park Service, entered the park via Cody, July 8th and left Gardiner July 16th.

Miss Estelle Phillee, of Denver, Colorado, visited the park with the National Editorial Society during the month. Miss Phillee is a musician of unusual ability and has written a great many songs, among them the music to "Out Where the West Begins".

Frank Branch Riley, nationally known lecturer, and wife, were visitors in the park in July. They entered West Yellowstone July 15th and left via Gardiner on July 23rd. As Mr. Riley lectures on the west especially, every facility possible was given him to secure data for future lecture work.

Dr. James C. Needham, of the Department of Entomology of Cornell University, was a visitor in the park this month. He entered West Yellowstone July 19th and left July 22nd at Gardiner. He is visiting many national parks.

D. W. Williams, of the Advertising Department of the Union Pacific Railroad entered West Yellowstone July 3rd and left by the same gateway July 10th. On July 6th he went to Jackson Hole with me.

On July 23rd Mr. D. S. Spencer and Mr. A. L. Craig, General Passenger Agents of the Union Pacific System, visited West Yellowstone (Western Gateway). Mr. Spencer also came over to Mammoth Hot Springs and conferred with officers of the public utilities and with me.

Asst. General Passenger Agent M. M. Goodsill, of the Northern Pacific, accompanied the National Editorial Ass'n

party through the park.

Asst. General Passenger Agent G. F. McNeill, of the Northern Pacific, accompanied the Weyerhaeuser party through the park, entering the Northern Entrance on July 2d and left via the same gateway, July 4th.

Many minor officials of all three railroads that serve the park were in the park during the month.

Jos. W. Byrns Jr., son of Congressman Jos. W. Byrns of Tennessee, was in the park from July 10th to July 22nd. He was traveling with Mr. and Mrs. G. A. C. Harris in their private car.

Mrs. Harry Payne Whitney, with her son and several other relatives and friends, visited the park early in July. The party entered West Yellowstone July 7th and went out via Cody July 9th.

Mrs. Percy Rockefeller, accompanied by her two daughters, Misses Faith and Winifred, and her son, Avery, were in the park early in July as the guests of Mrs. E. E. Byram, wife of the president of the Chicago, Milwaukee and St. Paul Railroad. Other members of the party were: Mr. Griffith Mark, of Lake Forest, New Jersey, and Mr. A. Villiers, of London, England.

Mr. Thomas W. Lamont, a member of the firm of J. P. Morgan and Company, Bankers, entered the park July 27th by West Yellowstone, and left July 29th via Gardiner. Mr. Lamont was accompanied by his son, his sister and several other relatives and friends.

Mr. Harold Smoot and wife, accompanied by Mr. David Bowells and wife, entered West Yellowstone July 24th and left on July 27th via the Southern Entrance in the Jackson Hole. Mr. Smoot is the son of United States Senator Smoot of Idaho.

Mr. Hal G. Everts, writer for the Saturday Evening Post, who entered the park on June 28th as reported in the June report, left the park July 5th via Cody, going thence on July 7th to Glacier Park.

Randall L. Jones, of Cedar City, Utah, and interested in Zion and Grand Canyon National Parks, accompanied by his wife, entered the Western Gateway July 15th and went out the same way July 21st.

Hon. J. H. Sinclair, Congressman from North Dakota, entered the park July 11th with his family, touring in his own car. He participated in the ceremonies commemorating the Fiftieth Anniversary of the park and left on the 14th for Cody.

Governor Robt. D. Carey, of Wyoming, and Mrs. Carey, passed through the park from the Jackson Hole to Cody on July 16th and 17th.

Lieut. Gov. C. C. Moore, of Idaho, visited the park on July 14th and 15th, assisting at the Fiftieth Anniversary ceremonies.

Lieut. Gov. Nelson Story, Jr. of Montana, was here July 16th to welcome the National Editorial Association to Montana.

Special Parties

The Walter League Party, which arrived in Yellowstone on July 23rd, was one of the biggest rail parties ever brought to the park. This party, consisting of 450 people came to the park from Omaha, where it had been holding its annual convention. It was necessary to go to considerable trouble to accommodate such a large party and the schedules of the Transportation Company had to be readjusted to take care of the situation but everything went along quite smoothly and the members of the party expressed their satisfaction at the treatment received and were much pleased with the trip. (A schedule is attached to this report regarding this party).

The Valley Ranch Company has had two parties in the park during the month of July. The Girls' Party, composed of girls from prominent eastern families, arrived via Cody on July 4th. The party is directed by Miss Anna A. Coleman, of Pelham Manor, New York, assisted by a staff of seven competent women from the faculties of eastern colleges and schools. Mr. A. C. Newton is the head guide of the party. The girls are riding horseback over the trails of the park and will be here until the middle of August.

The Boys Party arrived in the park on July 5th from their first camp at Cody. They will also be in the park until the middle of August.

The Oregon Journal Party arrived in the Park July 24th via Gardiner, for the regular 4½ day tour. The party left the 26th.

The Massachusetts Forestry Association party, consisting of about 30 ladies and gentlemen, entered the park June 30th by the Northern Entrance and left via Cody July 4th.

The Weyerhaeuser party, consisting of 78 members of the Weyerhaeuser organization, including Messrs. R. M. and J. H. Weyerhaeuser, entered the park by Gardiner July 2nd and left July 4th. This party traveled with a special train under the guidance of J. H. McNeill, Assistant General Passenger Agent of the Northern Pacific Railroad..

On July 1st the following members of the St. Louis Police and Detective Organization entered the park at West Yellowstone: P. H. Brookman, (President, Police Board) and wife; Martin O'Brien, (Chief of Police); R. A. Hoagland, (Chief of Detectives); and E. J. Noonan. They took the regular trip and left the Western Gateway July 4th.

Twenty-five members of the Kappa Kappa Gamma Sorority entered the park at Cody on July 17th and left by the same gateway July 21st.

Members of the National Editorial Association, bound for the Annual Convention of this organization which was held in Missoula, Montana, entered the park via Cody, July 13th and left via Gardiner July 16th. There were about one hundred editors in the party, and including wives and children of members the party totalled about 160. The editors participated in the Fiftieth Anniversary Celebration of July 14th.

Motion Pictures

Motion picture permits for the season of 1922 were issued during the month to the following:

Mr. F. J. Hiscock, of Cody, Wyoming, on July 15, 1922.

Mr. T. H. Hilderbrand, of Chicago, Illinois, on July 21, 1922.

Mr. W. R. Mills, of St. Paul, Minnesota, on July 21, 1922.

Dr. F. M. Law, of New York City, on July 21, 1922.

Miscellaneous

Religious Services: Mr. W. Friend Day, Layman of the Episcopal Church, held services on July 2nd, at 10:30 a.m. and 8:00 p.m.; July 9th, Rt. Rev. Wm. F. Faber, Bishop of

Montana (Episcopal), communion service at 10:30 a.m., and W. Friend Day, 8:00 p.m. July 16th, 10:30, W. Friend Day, and 8:00 p.m. Rev. J. H. Groth of Livingston, Montana, (English Lutheran); July 23rd, 10:30 W. Friend Day, 8:00 p.m. Rev. J. H. Groth; July 30, 10:30 a.m. and 8:00 p.m. W. Friend Day.

Mass was read by priests of the Roman Catholic Church on the mornings of July 22; July 23rd; July 28th and July 29th.

Semi-Centennial: On July 16, 1922, at 10:30 a.m. at the junction of the Firehole and Gibbon Rivers (which rivers join to make the Madison), and at the foot of National Park Mountain, a celebration took place in commemoration of the Fiftieth Anniversary of the setting apart of Yellowstone as a National Park. Over 100 members of the National Editorial Association were present and took an active interest in the celebration.

A stage was erected for all honor guests and speakers. Mr. C. W. Cook, nearly 84 years old, and a member of the Cook-Folsom party of 1869, participated in the ceremonies. It was the first time Mr. Cook had been here since the Expedition of 1869 - 53 years ago.

Addresses were made by: Supt. Horace M. Albright, Lieut. Gov. C. C. Moore, of Idaho; Congressman J. H. Sinclair of North Dakota, representing the Federal Congress; Hon. J. C. Brimblecom, of Newton, Massachusetts, Acting President of the National Editorial Association, and member of the Massachusetts Legislature. The keynote of all the speeches was the National Park idea of Cornelius Hedges and the policy of complete preservation.

Two sons of Cornelius Hedges, W. A. & Cornelius Junior, planted a tree in honor of their father on the exact spot where the campfire was held September 19, 1870 - the campfire at which Cornelius Hedges propounded the National Park Plan.

Copies of the addresses made upon the occasion of the celebration of the Fiftieth Anniversary of Yellowstone National Park will be forwarded as soon as they have been put into proper shape. Several pictures are enclosed herewith. The following telegrams were received and read at the opening of the ceremonies:

The White House, Wash., D.C.
July 13, 1922

Supt. Albright, Yellowstone Park.

With over seven million acres of the choicest scenic area of the

United States, Hawaii and Alaska reserved as National Parks dedicated and set apart for all time as pleasure grounds for the people, it is singularly appropriate that persons from all sections of our country should today assemble in Yellowstone Park at the site where the National Park idea was born to celebrate the fiftieth anniversary of its creation. We now realize that with its establishment as the first National Park came also the recognition of the principle that scenery of supreme majesty is a national asset worthy of preservation for the use and enjoyment of future generations as well as those of our time. I congratulate the American people on the possession of their National Parks.

Warren G. Harding

Washington, D. C.
July 13, 1922

Supt. Albright
Yellowstone Park, Wyo

As the representative of the people charged with the executive control of their National Parks, I welcome those gathered together today to celebrate the fiftieth anniversary of its creation by the Congress as our first National Park. It is fitting indeed that the place selected for the ceremonies should be on the very spot where fifty two years ago that patriotic and sturdy pioneer Cornelius Hedges first gave expression to the lofty thought that the wonders of the Yellowstone belonged to all the people and should accordingly be safeguarded by congressional action for the people and posterity.

Albert B. Fall

Helena, Montana
July 13, 1922

Horace M Albright
Yellowstone Park, Wyo.

Circumstances are such that it will not be possible for me to be present at ceremonies commemorating Judge Hedges suggestion for creation Yellowstone National Park. It is most appropriate that

the National Editorial Association representing all sections of the nation should take the initiative in making this fiftieth anniversary an event of Nation wide importance. The thought that originated with Judge Hedges half a century ago initiated the great movement that has resulted in the creation of these great national playgrounds and the preservation of the natural scenic wonder of America. I regret exceedingly that the exigencies of the public service make it impossible for me to be present.

Joseph M. Dixon
Governor of Montana

2

Cheyenne, Wyoming,
July 13, 1922

Horace M Albright Supt
Yellowstone Park Wyo

The National Parks are one of the greatest assets which this country possesses and I feel that Congress has shown great wisdom in establishing the many National Parks that we have. Wyoming is proud of having a greater part of the Yellowstone Park within her borders, and appreciates the value of the Park to the State. I believe that this park and others should be conserved in their natural state, and should not be despoiled for commercial, industrial or other purposes. It should never be forgotten that the parks belong to the people and should be preserved for their benefit.

Robert D. Carey,
Governor of Wyoming.

Washington, D. C.
June 13, 1922

Hon Horace M Albright
Supt Yellowstone National Park, Yellowstone Park Wyo

I felicitate with you and other lovers of the marvelous and beautiful features of Yellowstone National Park on the Semi-Centennial of the entrance of the Washburn-Langford party, through which its wonders were made known to the world. The day is not far distant I hope when your national parks will rival Switzerland as places of rest and recreation.

T J Walsh
U S Senator of Montana

Charleston W Va
July 13, 1922

Supt Albright
Yellowstone Park Wyo

Heartily congratulate the National Park Service and Director Mather upon attainment tomorrow of fiftieth anniversary of creation of our oldest national park Yellowstone. It was a new phase of our national life and a grand one. National Parks are now one of our greatest assets. Wisdom of creating them thoroughly vindicated. National Parks Service doing grand work. Your services have contributed greatly. Wish you continued success in your great work.

H L Myers
U S Senator of Montana

Newcastle, Wyoming
July 13, 1922

Supt Albright
Yellowstone National Park
Yellowstone Park Wyo

Wyoming is proud of having within her boundaries a region of surpassing beauty and of unequalled natural wonders. We congratulate the country on the splendid management of this wonderland. I am happy to have had the opportunity of aiding in the

improvement of the Park and of helping to make its wonders and beauties accessible to the people of our State.

F. W. Mondell,
Member of Congress

Washington D C
July 13, 1922

Supt Albright
Yellowstone Park Wyo

At this time of the Semi-Centennial celebration of the creation of Yellowstone National Park, second oldest park reservation in our country, I find myself earnestly wishing that I could be there with you and other friends in the cool altitudes within sight of the snowcapped Tetons across Jackson Lake. It hardly seems credible that fifty years have passed since the fruition of the labors of those of us who as Wyoming pioneers and members of the territory legislature started to work on the segregation of the park area soon after Wyoming was separated from Dakota and made an independent territory. I am sorry Jim Bridger is not alive today to see how many people now enjoy the park and can testify to its wonders, and the fact that Bridger was not suffering from hallucinations as believed in those early days. With regards to you and all participants in the celebration.

F E Warren
U S Senator of Wyoming

Pocatello, Idaho
July 13, 1922

Horace H Albright
Supt Yellowstone Park
Yellowstone Park Wyo

I congratulate you and the National Park Service on your splendid management of the Nation's most famous and popular playground. Regret that I cannot personally participate in celebration of

the Fiftieth Anniversary of the establishment of the wonderful Yellowstone National Park, one of the great assets of the West.

Addison T. Smith
Member of Congress - Idaho

Washington D C
July 13, 1922

Supt. Albright
Yellowstone Park Wyo

When Cornelius Hedges at the campfire in the Yellowstone, that cold September evening in eighteen seventy, said that there should be no private ownership in the great Yellowstone region but that the whole of it ought to be set apart as a Great National Park, he voiced a thought which has been accepted and grown into a strong and unshakable national conservation policy for which future generations perhaps, more so than those of our own time, will show deepest gratitude. This great policy has been repeatedly emphasized since then by foresighted congresses by the reservation of other supreme beauty spots as National Parks until now the Yellowstone has eighteen younger brothers in the family. The best evidence of the National popularity of the National Parks system is found in the constantly increasing throng of happy people that leave the park refreshed and rejuvenated and better citizens for having come.

Cammerer

Washington D C
July 13, 1922

Supt Horace M Albright
Yellowstone Park Wyo

I extend to you and those assembled with you best wishes for a successful celebration of the fiftieth anniversary of our first National Park. We may well rejoice today that the patriotic spirit and National vision of a great citizen, Cornelius Hedges, has

saved for the service of the people this, the greatest of all rest and recreation grounds. The growing complexities of everyday life will compel us more and more as the years go by to seek relief and rest near to nature's heart. Let it be our duty to maintain unimpaired integrity of this Wonderland. Let us each and everyone set our faces resolutely against any and every plan to change or mar its surpassing beauty and restful environments in order that its blessings may be perpetuated not only for our own but for the people of every land.

John B Kendrick
U. S. Senator of Wyoming

Washington D C July 13, 1922

Supt Albright
Yellowstone Park Wyo

Today marks the fiftieth year of the establishment of the Yellowstone National Park, the first great National Park in the United States. It is a wonderland of beauty. In its multitude of interests and attractions. Among the men who did much for the Yellowstone stands preeminently the name of George Graham Vest, who stood like a rock in congress for the things that would protect and beautify the park. As a senator from Missouri, I extend through you my heartiest congratulations to the American people upon the possession of this priceless heritage and I assure you that the people of Missouri are as thoroughly in sympathy now with the principles fought for by my distinguished predecessor as they were when he stood as their forceful advocate.

Selden P. Spencer
U. S. Senator of Missouri

Laramie, Wyoming.
July 13, 1922

Horace M Albright
Yellowstone Park, Wyo.

Regret exceedingly that I am unable to be present at exercises of National Editorial Association commemorating the dedication of the Yellowstone National Park. In behalf of the Rocky Mountain Highway Association please extend greetings and best wishes to the Nation's Editor.

Stanley-Edwards, Secretary
Rocky Mountain Highway Ass'n

Circulars: Circular No. 15 was issued on July 28th and relates to the picking of wild flowers. A memorandum to the Chief Ranger, dated July 22nd, gives instructions for the handling of the Walther League party which was in the park July 23rd-27th. Copies of the above circulars are attached hereto. Also, a Memorandum to the Press, covering road conditions of approach roads to the park is attached.

IX. RECEIPTS AND REMITTANCES:

Enclosed is the monthly report of revenues due and collected and transmitted during July on the usual blank forms. The total amount collected as shown by the report is described as follows:

Postal Money Order No. 49025, dated June 17, 1922, drawn by the Postmaster at Yellowstone Park, Wyoming, on the Postmaster at Washington, D. C., amount	30.00
Certified check #398, dated July 8, 1922, drawn by J. E. Haynes, on the Yegen Bros. Bankers of Gardiner, Montana, to the Director, National Park Service, amount	7.50
Certified check #712, dated July 14, 1922, drawn by Howard Hays, on the Northwestern National Bank, Livingston, Montana, to the Director, National Park Service, amount	39.00
Certified check #3274, dated July 10, 1922, drawn by Elizabeth Trischman, on the Yegen Bros. Bankers, of Gardiner, Montana, to the Director, National Park Service, amount	6.41

Certified Check #14, dated July 6, 1922, drawn by
W. W. Nichols, on the National Bank of
Montana, Helena, Montana, to the Di-
rector, National Park Service, amount 137.34

Certified Check #1950, dated July 7, 1922, drawn by
W. W. Nichols, on the National Bank of
Montana, Helena, Montana, to the Director,
National Park Service, amount..... 185.40

Certified check #3228, dated June 24, 1922, darwn
by Elizabeth Trischman, on the Yegen Bros.
Bankers, of Gardiner, Montana, to the
Director, National Park Service, amount ... 18.00

Certified check #425, dated July 15, 1922, drawn by
J. E. Haynes, on the Yegen Bros. Bankers,
of Gardiner, Montana, to the Director,
National Park Service, amount 12.20

U. S. Postal Money Order #49388, dated July 12, 1922,
drawn by the Postmaster at Yellowstone
Park, Wyoming, on the Postmaster at Wash-
ington, D. C., amount 2.73

\$ 438.58

Revenue Received from the sale of Automobile and Motorcycle
Permits: Special Permits and Sale of Coyote Skins:

<u>Draft</u> <u>No.</u>	<u>Entrance</u>	<u>Automobile</u>	<u>Motorcycle</u>	<u>Entrance</u>	<u>Total</u>
3038	North	\$ 6,510.00	\$ 22.50	\$ 6,532.50	
3125	North	6,660.00	35.00	6,695.00	
		<u>13,170.00</u>	<u>57.50</u>		\$13,227.50
624	East	1,725.00	2.50	1,727.50	
3095	East	3,082.50	5.00	3,087.50	
3111	East	1,627.50	2.50	1,630.00	
3128	East	3,000.00	7.50	3,007.50	
3140	East	1,312.50		1,312.50	
3163	East	4,702.50	5.00	4,707.50	
3186	East	2,302.50	10.00	2,312.50	
		<u>17,752.50</u>	<u>32.50</u>		17,785.00

Draft No.	Entrance	Automobile	Motorcycle	Entrance	Total
P.M.					
Orders	West	3,731.25	12.40	3,743.65	
3096	West	390.00		390.00	
3174	West	2,332.50	10.00	2,342.50	
3184	West	1,725.00	15.00	1,740.00	
3149 & P.M.O.	West	8,921.40	25.00	8,946.40	
		<u>17,100.15</u>	<u>62.40</u>	<u>17,162.55</u>	17,162.55

625	South	112.50			
3097	South	210.00			
3112	South	225.00			
3113	South	862.50			
3185	South	<u>2,310.00</u>			
		<u>3,720.00</u>			3,720.00

Special Permits

Check #2163; operating two trucks, Cooke City
to Gardiner 40.00

P.M.O. #49607, operating one truck, Cooke City
to Gardiner 20.00

Check #58, Sale of coyote skins to Chas. A.
Hamilton 131.75

\$52,086.80

Cordially yours,

Horace M. Albright,
Superintendent.

The Director,
National Park Service,
Department of the Interior,
Washington, D. C.

HMA:
JGS:
BJP:

Side Trips from Old Faithful

By Motor

Black Sand Basin (including Emerald Pool, Handkerchief Pool, Punch Bowl, Daisy Geyser, Three Sisters) Lv. 8:30 AM and 3:30 PM Each passenger.....\$1.00
 The Star Geyser, Pine Forests. Each passenger.....1.50
 Great Fountain Geyser and Fire Hole Pool. Time 2 hours. Each passenger.....2.00
 Jackson Lake and Teton Mountains and return to Yellowstone Lake. Lv. 8:00 AM; Ar. Jackson Lake 12:00 noon; Lv. Jackson Lake 1:30 PM; Ar. Yellowstone Lake 5:45 PM. Each person.....10.00
 For details see Transportation Agent).

Saddle Horse (Conducted by Experienced Guides)

The Star Geyser by Forest Trail. Lv. 9:00 AM and 2:00 PM. Distance 8 miles. Time 2³/₄ hours, depends on wait for eruption of geyser—maximum time 3¹/₂ hours). Each person.....\$2.50
 Gard Lake by mountain trail. Distance 10 miles. Time 3 hours. Each person.....3.00
 Fire Hole Lake. Distance 24 miles. All day trip. Each person.....4.00
 Upper Falls. Distance 5 miles. Time 2 hours.....2.00
 Lake Point. Distance 2 miles. Time 1¹/₂ hours.....1.00

Walking Trips

Conducted by National Park Service rangers. Lv. 8:30 AM and 2:00 PM. By foot trail through Upper Geyser area. No charge.
 Swimming Pool near Fire Hole River. Natural water constantly flowing. Suit and towel \$.50
 Light from Old Faithful Inn; about 9 PM. Time announced in lobby.

Only Place in the Park where there is no Speed Limit

Boat service from Thumb to Yellowstone Lake. Wonderful new boat, speed 40 miles per hour. Booked limited to 10 passengers per day, and made in advance of application. Passengers for this thrilling trip leave Old Faithful after lunch via automobile to take the Speed Boat on arrival at West Thumb of Yellowstone Lake, arriving Lake Hotel and Lake Point about 4 PM. Distance of trip on Lake 20 miles. Highest altitude reached on trip 7,741 feet. Purchase tickets from Transportation Agent.

DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

Do you know that:

Although Yellowstone Lake now covers 139 square miles or 88,960 acres, and is one of the largest lakes in the world at so great an altitude (7741 feet above sea level); it was very much larger in recent geological times. Before the glacial epoch, Yellowstone Lake drained south through Heart Lake and Snake River into the Pacific Ocean. During the ice period, or shortly after, this exit became blocked, the water of the Lake rose higher and higher until it was 160 feet higher than at present, flooded Hayden Valley, and even extended north to the site of the Canyon Hotel. At that time, Yellowstone Lake covered 310 square miles, or more than twice its present size; but this increase brought with it, its own destruction. For the rising water found an outlet to the north along the line that is now the Grand Canyon, and flowed out until the Lake was reduced to its present level. The greatest depth is now 300 feet. Its shore line is approximately 100 miles.

Yellowstone Lake is in the heart of the game country. Bear, deer, and elk are all about it, especially in the higher valleys. About the southern end of it is the home of the Yellowstone Moose, and in its waters are large numbers of otter, while many osprey nest along shore and seek their fish food in the Lake itself.

Molly Island, at the southern end of the Southeast Arm, is the most eastern breeding ground of the White Pelican. 250 pair are nesting there, and also about a thousand California gulls.

Because it is possible to collect, hatch, and protect trout eggs better under artificial conditions than Nature can, a Fish Hatchery has been established near this hotel by the Bureau of Fisheries in co-operation with the National Park Service. During 1921, 3,000,000 of these artificially hatched trout were distributed in Park waters for the benefit of future fishermen.

Information bureaus in the West. Many interesting exhibits of natural features of the park. No charge.

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
YELLOWSTONE PARK, WYOMING

AUGUST NOTES ON THE FLOWERS

During early August, summer is at its height on the Park plateau and on the high mountains. But before the end of the month heavy frosts are apt to occur and autumn begins on the high peaks and gradually creeps down from the heights to the Park plateau, where most of the tourist routes lie. While the fields of blossoms on Mt. Washburn and our other peaks are now wonderful to behold, they have not the resisting capabilities of our earlier flowers and the frosts and droughts soon cut them down.

The big, yellow *Mentzelias* are still wonderful below Mammoth. Geraniums, Asters, Rocky Mountain Bee Plants, Sunflowers, Goldenrod, and some Lupines are in bloom below 7000 feet altitude. Here and there, Cedar berries and choke Cherries are ripening. So also, are the wild Red Raspberries but the birds and bears do not leave many for our eating.

On the Park plateau from 7000 to 8000 feet, Cinquefoil, Lupines, Groundsel, purple, yellow and golden Asters of many varieties, Yarrow, Harebells, Fringed Gentians, Beardtongues and Penstemons generally, both yellow and red Snapdragons, Indian Paint Brush, Umbrella Plants, Wild Buckwheat and Wild Parsley are the flowers chiefly responsible for the great masses of color marking roadsides and forests. Besides the yellow Water Lily, the only lilies left in bloom are one or two varieties of wild Onions. Recent rains have enabled the Little Elephants to continue on the dampest meadows, and Lungwort in the shady glens. The tall, purple spikes of Monkshood decorate the damp places, and the Fireweed is flaming everywhere along the roads. Strawberries, Gooseberries, Snowberries, Salmonberries, and Service Berries are ripening everywhere. The higher pine forests are matted beneath with masses of low Huckleberry shrubs and the tiny red berries are ripening. Altho different from the Eastern Huckleberry in size and color, they have the same taste and other properties. In other parts of the forests, Wintergreen and Kinni-kinick berries are reddening, especially toward the the end of the month.

It is the high mountains that carry our glorious flower gardens in August. The hills of the lowest elevations are dry and turning brown, but the highest mountain meadows are a glorious mosaic of color. Brilliant, scarlet Paint Brush, White Phlox, Alpine Yarrow, Buttercups, Purple Asters, and the ever-present Lupines form pictures of great beauty. But towards the end of August the first frosts will begin to blight the blossoms, and to color the leaves of Baneberry, Mountain Ash, Willow and the higher Aspens.

AUGUST NOTES ON GEOLOGY

At Mammoth, JUPITER TERRACE is holding its great improvement and beauty. ANGEL TERRACE is very beautiful and active at four different points. The WHITE ELEPHANT is holding the fine, varied color that it acquired in 1921. At the ORANGE SPRING, a small opening has formed this year on top and throws a tiny jet fifteen inches high; the small cone to the east of the mound continues to discharge hot water surcharged with gas. MOUND TERRACE is increasing and improving in color. CLEOPATRA TERRACE continues to be as beautiful as ever. MINERVA TERRACE shows a very fine stalactitic growth. The most prominent development is a fine spring and terrace forming on the northern part of the old MARBLE TERRACE.

At Norris Geyser Basin, the CONSTANT Geyser is playing every minute. The WHIRLIGIG continues to play from both old and new craters. The BATHTUB is a quiet, boiling pool of clear water. The MUD GEYSER has become uncertain. The MINUTEMAN Geyser plays irregularly at from one to five minute interval. The MONARCH has not played for over a year. The VALENTINE plays at long intervals.

The FOUNTAIN Geyser is uncertain but the GREAT FOUNTAIN is playing as usual every 8-10 hours, and the WHITE DOME is getting stronger and plays once every hour.

In the Upper Geyser Basin, the intervals of OLD FAITHFUL are from 60 to 70 minutes. The DAISY continues to play quite regularly every 70-80 minutes. The GROTTTO plays at frequent intervals, but there is no regularity as to its period between eruptions, or as to duration of eruptions. The GIANT is giving wonderful displays every 7-15 days. The GIANTESS should play every two to four weeks. The BEEHIVE should play once or twice following the Giantess; a small geyser ten feet east of the main Beehive cone plays twenty minutes before the larger geyser erupts. A new geyser that promises to attract a great deal of attention has begun operations about 300 feet south of the Giantess; it is small yet but it plays regularly every twenty minutes. The GRAND still continues its wonderful activity; no indicator has been discovered but this geyser plays every 9-12 hours. The displays last 15-30 minutes and consists of six to twelve separate eruptions. The CASTLE usually plays three to five times at one day interval and is then quiet for a week or so. The spurts thrown out ten to thirty feet high at short intervals are **not** an indication of approaching activity. The RIVERSIDE geyser is very regular every 7 to 8 hours. The LONE STAR Geyser is giving fine displays every three hours, with a long series of preliminary eruptions extending over an hour and a half before each main eruption.

AUGUST NOTES ON THE ANIMALS

The show herd of 18 fine BUFFALO bulls are on view at the Corral near Mammoth. So far, a hundred calves have made their appearance in the tame herd this year. The wild herd, too, has been found to be flourishing.

MOUNTAIN SHEEP are on the high mountains but occasionally seen now two months old.

ANTELOPE are quite frequent near Tower Falls and Camp Roosevelt. They are now three months old and quite as speedy as their parents. Horns of the adults are now about the middle of the month but still covered with skin.

ELK are on the high mountains to get away from the flies. Not apt to make short trips into the forest glades or up the mountains should they be driven about the middle of the month but still covered with skin. Still spotted with round, white spots. A small band of elk are in the Mammoth.

DEER might be seen in ones and twos at almost any point throughout the park but still covered with skin. The fawns are three months old and still spotted.

BEAVER are shy but might be seen at almost any point in the evening. They are now mostly left their houses and dams to lead a more or less wandering life.

COYOTES are common enough and often seen, but wolves and mountain lions are rare.

BLACK, BROWN, and CINNAMON BEARS are all the same species. They are to be seen about the dumps near Old Faithful. In addition might be seen at almost any point along the roads and trails. Having been born a month or more before the parents left their place, friendly they seem, all bears are subject to dangerous fits without warning.

GRIZZLIES are comparatively rare but might be seen about the dumps at sunset and sometimes before sunrise. Not apt to be seen in daytime.

AUGUST NOTES ON THE BIRDS

August is a very unsatisfactory month to study our birds. The season is over; most of the young birds have been cared for and are out of the nest; consequently most morose; and finally it is so warm that the bulk of the birds are in their retreats.

Fall migration has begun with the arrival of the willet and solitary sandpiper. Birds and waders will come down from their northern homes, and the swallows will leave us during the last week of the month.

The presence of young birds will prove very confusing in the effort to identify our birds. Only a few of the warblers, the swallows, the night hawks, and mountaineers of the robin, bluebird and junco species are still nesting. At the osprey nest on Eagle Nest Rock the young are almost grown. In the Grand Canyon of the Yellowstone there are two nests easily seen below Inspiration Point, each with two nestlings hatched out in early July; and a nest below Grand View where three young osprey were hatched about July 10th. Besides these, there are about twenty other nests of osprey in the Canyon between the Upper Falls and Inspiration Point but mostly well hidden and not so easily found. There is another nest on a tree beside the East entrance road about five miles from Lake Junction. During early August the ospreys will be seen on the nests shielding their young with half-raised wings from the fierce rays of the hot sun.

It has been a favorable year for the broods of geese and ducks. Large numbers of Canada geese are on Grebe Lake and at the south end of the Yellowstone Lake. Mallards and blue wing teal are in numbers on the marshes south of Yellowstone Lake. White pelicans and gulls are nesting on Molly Island and this month the young pelicans and gulls begin to leave their nests.

THE NATIVE, OR, BLACKSPOTTED TROUT

This is sometimes called the Cut-throat trout because of the red mark along the lower edge of the gill-covers. It is a native of the Rocky Mountains and is peculiarly abundant in the Yellowstone Lake and River, Snake River, Heart Lake and all their tributaries. It is an active, cold water trout, but does not grow to large size. It varies a good deal in color in different localities; but its upper parts always have small black spots, which sometimes extend evenly from the nose to the tail. Its food consists of all sorts of creatures living in the water and of insects which accidentally fall in from above.

Approved:

HORACE M. ALBRIGHT,
SUPERINTENDENT.

M. P. SKINNER,
PARK NATURALIST

Is your time worth \$5.00 a minute to you?

You can beat this schedule by 6 minutes, without trying, and be liable for a \$30.00 fine—six minutes \$30.00—\$5 per minute. If you don't care about the fine the Company does care about the chances for a bad accident on this particular piece of road. Follow the schedule both when carrying passengers and dead-heading to and from the Camp and we will all be happy.

Between Canyon Camp
and Chittenden Bridge
10 M.P.H. 5 min.

Between Chittenden
Bridge and Ranger Sta.
10 M.P.H. 3 min.

Between Ranger Sta.
and Canyon Hotel
10 M.P.H. 6 min.

There are plenty of rangers, plenty of watches, and plenty of trees to hide behind—you can't beat the combination or schedule without being caught.

STATEMENT SHOWING AUTOMOBILE TRAVEL BY STATES
YELLOWSTONE NATIONAL PARK
JULY 1922

NAME OF STATE	NORTH		WEST		EAST		SOUTH		TOTAL	
	Pass-	Pass-	Pass-	Pass-	Pass-	Pass-	Pass-	Pass-	Pass-	
	Cars	engers	Cars	engers	Cars	engers	Cars	engers	Cars	engers
Alabama	1	2			3	9			4	11
Arizona	1	2	7	25	2	7			10	34
Arkansas	1	6	5	20	13	46	4	20	23	92
California	180	529	269	829	66	201	19	56	534	1615
Colorado	28	80	34	95	201	706	45	140	308	1021
Connecticut			1	6	9	27	1	3	11	36
Delaware										
Dist. of Col.	4	16	2	6	8	20	2	4	16	46
Florida	5	13	4	13	10	27			19	53
Georgia	1	3			3	7			4	10
Idaho	26	103	428	1677	6	18	104	452	564	2250
Illinois	78	272	29	101	139	440	12	42	258	855
Indiana	41	137	5	21	64	197	4	12	114	367
Iowa	75	258	39	147	129	483	9	23	252	911
Kansas	8	29	25	83	126	431	12	50	171	593
Kentucky	1	2	1	2	10	36	1	5	13	45
Louisiana	4	8	4	17	6	17	1	4	15	46
Maine	2	6			4	11			6	17
Maryland			1	5	12	49			13	54
Massachusetts	10	24	4	11	18	53			32	88
Michigan	34	108	13	35	72	228	4	14	123	385
Minnesota	115	389	7	19	80	265			202	673
Mississippi					2	8			2	8
Missouri	14	38	23	90	92	298	3	6	132	432
Montana	634	2278	290	1116	210	804	3	8	1137	4206
Nebraska	33	111	22	85	159	563	19	65	233	824
Nevada			17	58			1	2	18	60
New Hampshire			1	4					1	4
New Jersey	14	44	1	4	14	45			29	93
New Mexico			4	9	10	27			14	36
New York	31	107	4	12	49	154	3	10	87	283
North Carolina	5	22			1	2			6	24
North Dakota	75	284	7	21	58	218	1	3	141	526
Ohio	54	187	13	43	104	314	12	40	183	584
Oklahoma	14	43	17	64	85	265	20	68	136	440
Oregon	49	162	75	252	9	33			133	447
Pennsylvania	25	78	13	42	43	133	1	5	82	258
Rhode Island	1	2			4	10			5	12
South Carolina					2	7			2	7
South Dakota	61	206	8	23	70	232	8	34	147	495
Tennessee	4	14	1	6	3	7			8	27
Texas	12	37	22	93	64	228	11	39	109	397
Utah	7	21	387	1474	3	13	90	352	487	1860
Vermont			1	3	4	8			5	11
Virginia	1	6	1	3	6	18	1	4	9	31
Washington	198	662	136	457	25	85	4	9	363	1213
West Virginia	2	7	3	7	5	15			10	29
Wisconsin	73	269	9	30	58	217	1	3	141	519
Wyoming	36	125	28	95	351	1307	174	612	589	2139
Alaska			1	4	1	4			2	8
Hawaii	36	120	19	66	9	27			64	213
Grand Total	1994	6810	1981	7173	2422	8320	570	2085	6967	24388
Cars and Passengers entering second trip, unclassified by:										
state-									236	795
Motorcycles, unclassified-									57	93
Grand Total all Cars and Passengers classified and unclassified									7260	25276
Total Automobile Travel for Season-									9617 cars	
Total Automobile Passengers for Season-									33788	

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK

1922 COMPARATIVE TRAVEL FIGURES WITH 1920 AND 1921
MONTH OF JULY

JULY 1922

ENTRANCE	RAIL (People)	MOTOR	MISC.	TOTAL	TOTAL
	Total:	People	(People)	(People)	(People)
	Hotels Camps Rail	Cars People	MONTH	SEASON	
NORTH	1892: 1369 : 3261:	2040 : 6330 :	97 :	10788 :	& 17021 :
WEST	3565: 2974: 6539:	2091 : 7500 :	223 :	14262 :	18795 :
EAST	1096: 1213 : 2309:	2463 : 8440 :	199 :	10948 :	13128 :
SOUTH	: : 35:	686 : 2406 :	44 :	2486 :	2626 :
T O T A L	6553: 6056 : 12645:	7260 : 25276 :	563 :	38484 :	51570 :

JULY 1921

ENTRANCE	RAIL (People)	MOTOR	MISC.	TOTAL	TOTAL
	Total:	People	(People)	(People)	(People)
	Hotels Camps Rail	Cars People	MONTH	SEASON	
NORTH	1485 : 1455 : 2940:	1937 : 6963 :	124 :	10027 :	14157 :
WEST	3198 : 1981 : 5179:	1894 : 6880 :	66 :	12125 :	15708 :
EAST	671 : 876 : 1547:	2128 : 7414 :	107 :	9068 :	10949 :
SOUTH	: : 369 :	1277 : 22 :	1299 :	1381 :	
T O T A L	5354 : 4312 : 9666:	6378 : 22534 :	319 :	32519 :	42195 :

JULY 1920

ENTRANCE	RAIL (People)	MOTOR	MISC.	TOTAL	TOTAL
	Total:	People	(People)	(People)	(People)
	Hotels Camps Rail	Cars	MONTH	SEASON	
NORTH	1752 : 1697 : 3449:	1641 : 5977 :	9426 :	12576 :	
WEST	3753 : 2294 : 6047:	1717 : 6414 :	131 :	12592 :	15742 :
EAST	745 : 878 : 1623:	1748 : 6247 :	21 :	7891 :	9028 :
SOUTH	: : 291 :	1094 : 6 :	1100 :	1117 :	
T O T A L	6250 : 4869 : 11119:	5397 : 19732 :	158 :	31009 :	38463 :

TRAVEL RECORDS BROKEN IN 1922

Opening Day, June 20th, 1613 tourists. Previous Record 733 in 1920.

Rail Travel for single day. Record broken June 20th, when railroads delivered Park gateways 1223 people. Previous record 665 on August 10, 1920.

Largest days Travel in history of Park, 1983 on July 23rd.

Largest Party, Walther League, 481 entered West Yellowstone July 23rd.

Rail Travel for single gateway. Record broken July 23rd, by Union Pacific, which delivered 757 at West Entrance. Previous Record established by Northern Pacific on June 20, 1922, when 734 people arrived at North Gateway.

Total Travel of Season - 51570. Previous Record 42195 in 1921.

Rail Travel to date - 17735. Previous Record, 14751 in 1920.

Auto Travel to date - 32749. Previous Record, 28223 in 1921.

*Ranger
Quarters*

Department of the Interior
National Park Service
Yellowstone National Park

July 28, 1922.

CIRCULAR NO. 15.

I understand that the rangers are in the habit of taking flowers away from the tourists. This must not be done, unless it is evident that the tourist had destroyed large fields of flowers by taking them in excessive quantities. It is all right in the Park for a tourist to pick little bouquets of flowers, and when picked they must never be taken away from the tourist. If a tourist has picked flowers along the road he should be told not to do that again, but, under no circumstances, should the flowers be taken away.

Hotel and Camp help, however, must pick their flowers away from the road, and for the large quantities that are necessary for the decoration of the tables, special areas for picking must be selected by the ranger in charge of station and assigned to the Hotels and Camps.

Please circularize all of the ranger stations with this memorandum and see to it that no more tourists are embarrassed by relieving them of flowers.

This circular is issued in accordance with the provisions of Rule 1 of Rules and Regulations.

HORACE M. ALBRIGHT
Superintendent

Department of the Interior
National Park Service
Yellowstone National Park

For release ON RECEIPT.

ATTENTION AUTOMOBILE EDITOR:

(Note - Attached to the following story is the first complete resume of automobile highway approaches to the Yellowstone National Park, open and in general use this season. The notes were compiled by Horace M. Albright, Superintendent of Yellowstone National Park, and are therefore authentic and official.

In view of the large number of people from your section who are "making" the Yellowstone and other national parks by automobile, the road information contained should be of particular interest).

Yellowstone Park, Wyoming, August 00.-- If one doubts that all summer roads lead to Yellowstone National Park, all one has to do is to stand at any one of the four entrances to the Park and read automobile licenses by the score from every state in the Union.

July motor travel to the Park - and rail travel as well - has outstripped all previous records in the Park's history, and there is every indication that during August, the height of the Yellowstone season, there will be an unprecedented migration of "highway fans" to the natural wonderland atop of the Rockies.

Up to ^{the end of July,} a total of 51,000 people came to the Yellowstone, 33,500 of them by automobile, while the railroad total for the season was 17,500. The total travel is 8,000 more than travel of the same date last year.

Modern gypsying - with the comfortable motor replacing the lumbering, rickety camp wagon - would seem to be the coming national summer pastime, if it does not head the list in popularity already. Each year and each month brings thousands of new highway devotees to the religion of outdoors, as the homegoing auto tourists spread their stories of the delights and adventures of the open road.

Even transcontinental motoring has ceased to be much of a novelty, so numerous are the highway tourists from the Atlantic states.

But so far as motor travel to the Yellowstone is concerned the western, and particularly the Pacific states, continue to be far in the lead, with hundreds of motorists coming to the Park daily from California, Oregon and Washington. There is also heavy travel from all of the Rocky Mountain states and from the Middle West.

Competition for the tourist travel among the states immediately surrounding the Yellowstone makes for continuous highway improvement and stimulates the opening of new roads and the advertising of the attractions of all the great mountain reaches.

Several new approaches to the Yellowstone have been opened this year and reports of motorists coming to the Park are uniformly to the effect that road conditions are good. Barring the inevitable "bad stretches" here and there, one is sure of traversing smooth roadways all the way to the Park from whatever point of the compass he may start.

The principal additions to what may be termed the Yellowstone system of highways - the network of roads centering in the Park - are the two new roads from southern Wyoming. Both roads traverse country heretofore almost untouched by automobile travel and destined to become famous throughout the nation for the splendor of the scenery they reveal to the highway voyager.

The following is the first complete resume of the automobile routes to the Park, with notes on road conditions. It was compiled by Horace M. Albright, Superintendent of Yellowstone Park, and is therefore official, impartial and authentic.

East Entrance Roads

The following roads approach the east entrance of the Park:

1. The Yellowstone Highway (part of the Park-to-Park Highway) runs from Denver and Cheyenne to Cody via Wheatland, Douglas, Casper, and Thermopolis. This road is under state maintenance ~~and~~ throughout its entire length and is in excellent condition.

2. The Black and Yellow Trail comes to Cody from Chicago. It traverses South Dakota, Black Hills and the Big Horn Mountains. It is a very scenic route. The state, with federal aid, is now completing the section of road between Buffalo and Ten Sleep in the Big Horn Mountains - a most beautiful stretch of mountain country. This section will soon be finished and with it the Black and Yellow Trail will be open for tourist travel throughout its entire length.

3. The Custer Battlefield Hiway (correct) runs from Council Bluffs and Omaha, across South Dakota and the Black Hills, to Wyoming, Montana and Glacier Park, and crosses the battlefield where Custer and his army were massacred forty-six years ago. Yellowstone Park may be reached from the Custer Battlefield, from Gillette or Sheridan, Wyoming, thence to Buffalo and on to Cody, or, the traveler may leave this route at Billings and take the Yellowstone Trail or National Parks Highway to Gardiner, the north entrance. The Custer Battlefield Hiway is reported to be in excellent condition and is especially well signed.

4. The Yellowstone Trail, the first trans-continental route to Yellowstone Park and the Northwest to be marked and improved, is in unusually good condition this year. It leads to the Park from Livingston, Montana, but there is a good road between Billings, Montana and Cody and many tourists traveling the Yellowstone Trail go into the Park by way of Cody and go out the north entrance re-joining the trail at Gardiner, Montana.

5. The National Parks Highway also leads to the Cody or Eastern entrance in the same way that the Yellowstone Trail does. The National Parks Highway is well marked and its main entrance to the Park is by way of Livingston and Gardiner.

North Entrance Roads

The permanent highways leading to the north entrance of the Park, through Livingston, Montana, are:

1. The Yellowstone Trail, and
2. National Parks Highway as above described, both in excellent condition.

The north entrance routes between Yellowstone Park and Glacier Park are:

1. The Geysers-to-Glacers Trail via Choteau, Wolf Creek Canyon, Helena, Townsend, Bozeman, and Livingston.
2. The Glacier-Yellowstone Beeline Highway (part of Park-to-Park Highway) via Choteau, Great Falls, White Sulphur Springs, and Livingston.
3. The Flathead Valley Route via Kalispell, Missoula, Butte, Bozeman, and Livingston.

West Entrance Roads

1. The road from Bozeman up the West Gallatin River, to the northwest entrance of the Park may also be termed a north entrance road, likewise, a west entrance road, as it goes on to the west.

entrance at West Yellowstone after traversing the Park for a number of miles, then going outside along the west line for several miles. Over \$100,000 is being expended this year in the further improvement of the West Gallatin Road and it will soon be one of the finest highways in the Northwest.

2. There is a road that is in very good condition and much traveled leading to the Western entrance by way of the Madison River. This road runs through some very interesting mountain country and along the shore of Hebgen Lake. There is fine fishing along all of this route as well as the West Gallatin Road.

3. Another popular route to the West entrance is the Vigilante Trail, which leads to the Park from Butte by way of the Ruby Valley, the famous Alder Gulch placer diggings and old Virginia City, full of historical sentiment, beautifully situated in old placer diggings. This town is one of the oldest in the West. The Vigilante Trail is especially well marked.

4. The main road to the West Entrance from the south leads from Salt Lake City to the Park by way of Ogden, Pocatello, Blackfoot, Idaho Falls, St. Anthony, etc. Not only is this a well built, wide road, but throughout almost its entire length it is either paved or well graveled. It is an exceedingly popular approach road to the Park. It is possible to turn off of this road near Idaho Falls or Ashton and come into the southern entrance of the Park by way of Teton Pass and Jackson Hole. At Pocatello the Evergreen Trail from Washington and Canada joins this highway. Also the old Oregon Trail delivers its automobile tourists to this west approach road at Pocatello. A great many people are using these roads from Oregon and Washington and coming into the West entrance in order that they may enjoy the scenery of the Columbia River Highway and the valleys of the Snake River.

At Salt Lake the Victory and Lincoln Highways join this important approach road. Both of these trans-continental routes have San Francisco as their starting point and lead through the Sierra Nevada Mountains eastward through Nevada and Utah. Also Salt Lake City receives travelers from the Midland Trail, which traverses Yosemite Park in leaving California. Visitors from southern California come in large numbers to Yellowstone Park by way of the Arrow Head Trail or the Midland Trail, both of which are in excellent condition this year.

South Entrance Roads

There are two main approach roads to Yellowstone Park from the south, as follows:

1. The Rocky Mountain Highway, leading from Denver through southern Wyoming to Pawlins, thence to Lander, thence up the Wind River through the Shoshone Indian Reservation, to the headwaters of the Wind, above Dubois, past Brooks Lake - a marvellously beautiful sheet of water near the Continental Divide - thence over Twogwotee Pass and down to Jackson Lake. Two new Inns have been erected on this road for the accommodations of visitors - one at Brook's Lake, called "Twogwotee Inn", and one on Jackson Lake, near Moran, called "Amoretti Lodge". This route to the Park was dedicated with elaborate ceremonies on August 20, 1921.

2. The other route leading to the southern entrance is the Hoback Canyon Road, formally dedicated and opened to the public on July 15th of this year. This road leaves the Lincoln Highway at Rock Springs and

leads northward to the headways of the Green River, thence through some wonderful canyons to the Jackson Hole. It traverses the entire length of the Jackson Hole to the southern entrance of the Park. While this road will be undergoing further improvements this year it is available for cars not too heavily loaded, and by next year will be in the best of condition for all types of motor vehicles.

It is also possible to reach this highway from Kemmerer, Wyoming.

Lincoln Highway

As a large number of motorists travel East and West over the Lincoln Highway it is well to remember that Yellowstone Park can be reached over many of the highways described above directly from the Lincoln Highway. One may leave the Lincoln Highway at Cheyenne, go north over the Yellowstone Highway to Cody, or, he may leave the Lincoln Highway at Rawlins and go to the south entrance of the Park by way of Lander and Twogwotee Pass, or, he may turn from the Lincoln Highway at Rock Springs and take the Hoback Canyon route into the Jackson Hole and thence to the Park, or he may go northward from Salt Lake City and Ogden to the West entrance by way of Pocatello and Idaho Falls.